

From Lifecycle to Ecocycle: Renewal via Destruction and Encouraging Diversity for Sustainability

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The basic idea:

The evolution and sustainability of complex adaptive systems includes the natural and necessary processes of *destruction and renewal*. The ecocycle framework invites leaders to think about what they need to deliberately destroy or stop doing to facilitate the renewal of their work in health care.

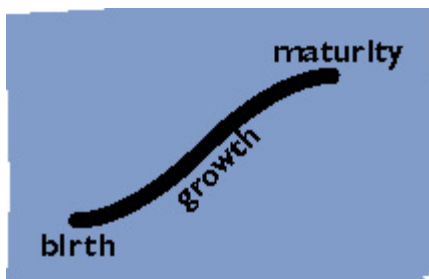
Drawing from biological systems, the ecocycle also suggests a need for a "healthy" organization or system to have parts (or aspects) of the organization in every phase of the ecocycle. Diversity in the phases of ecocycle is crucial for the sustainability of a complex adaptive system.

Potential context for use:

- ◆ To identify things that you should stop doing in order to support the renewal of the work (or of health care).
- ◆ To recognize when you are complicit in perpetuating the very things you know need to be stopped.
- ◆ To redirect energy and reallocate resources to activities that support renewal and change.
- ◆ To determine the skills and attributes needed for a management team, board of directors or project team.
- ◆ As a contingency framework, to determine which techniques or approaches are needed for different phases of work.
- ◆ To encourage diversity in the stages of the ecocycle by recognizing that healthy organizations or systems exhibit all phases of renewal, birth, maturity and destruction.

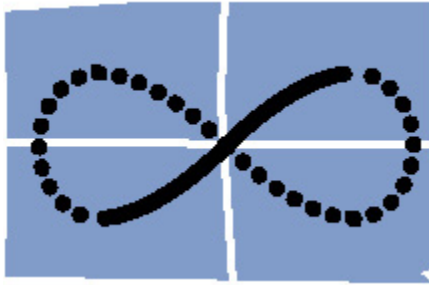
Description:

The lifecycle model of organizations has proven useful to understand the growth and maturity of industries and organizations. It has been called the S curve in business schools. It depicts the birth, growth and maturity of a business or industry.



However, the S curve has failed to address other aspects of living systems: their death and conception, in other words the phases of destruction and renewal. The model is silent on these aspects of a true-life cycle. The ecocycle extends the lifecycle concept to incorporate these dimensions. The evolution and sustainability of complex adaptive systems includes the natural and necessary roles of destruction and renewal. The paradox is that renewal and long-term viability requires destruction.

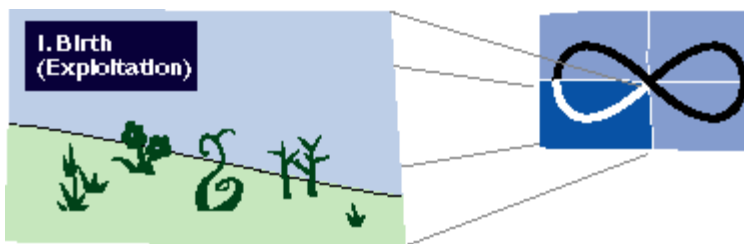
The ecocycle concept is used in biology and depicted as an infinity loop. In this case, the S curve of the business school life cycle model is complemented by a reverse S curve. It is the reverse S curve, shown below with the dotted line, that represents the death and conception of living systems. In our depiction of the model, we call these stages creative destruction and renewal. The importance of the infinity loop is that it shows there is not beginning or end. The stages are all connected to each other. Hence renewal and destruction are part of an ongoing process.



Being an infinity cycle, there is no obvious start or end to the cycle. Let us begin our examination of the stages at the beginning of the traditional S curve. We will begin each phase by using the biological example of a forest and then look at the analogous phase in human organizations.

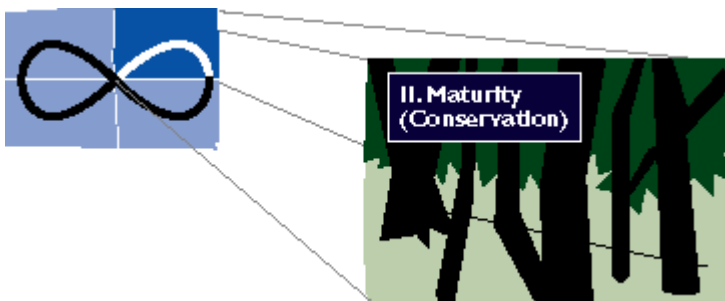
The lower left-hand quadrant is the birth and early stage of life phase. This may be an open patch in a forest. This state is characterized by a wide variety of species all competing for the resources. There is usually not one dominant species. There are a lot of births in this stage, however, many of the new births do not reach maturity.

In human organizations, this is the early "entrepreneurial" phase of an industry or organization. This is a period of high energy, lots of new ideas and trial and error learning. Resources are spread over a variety of projects or activities.



In the forest, after a while the open space becomes crowded, competition starts to require efficiency. Fewer species are supported as the resources become consolidated or conserved in a few trees that begin to dominate the space. This maturity or conservation phase is the upper right-hand quadrant on the ecocycle.

In human organizations, traveling up the S curve from the lower left-hand quadrant to the upper right-hand quadrant has been the mainstay of business wisdom for the past 50 years. Strategic planning, budgeting and most control systems are designed for this process of consolidation and improving efficiency. Streamlining operations and allocating resources with more predictable returns is good management as you move through this phase.



We now move to the reverse S curve as we move to the lower right-hand quadrant. This is the phase of creative destruction or in our forest analogy: the forest fire. The system is not fully destroyed. But this is not obvious to the naked eye. The burning of the trees and dead wood releases nutrients and genetic material into the soil to create the conditions for new growth.

In human organizations, the creative destruction phase may require dismantling systems and

structures that have become too rigid, have too little variety and are not responsive to the current needs of the community (or market). An additional level of difficulty in human organizations is the consciousness of the participants who may cling to the old ways because they were the keys to success as they moved up the S curve. This can be a very disturbing, unsettling time for organizations as assumptions need to be exposed and re-examined in light of changing needs and environments. However, the creative aspect of the creative destruction phase also indicates the potential for this to be a period of high innovation and new insights.



The quadrant in the upper left completes the reverse S curve and the ecocycle. This is the mobilization and renewal phase. In a forest, this is the phase after the fire where open spaces have now been created. The soil is rich with nutrients and the number of possibilities of how these nutrients will be recombined is very great. It is rich with potential but it is not at all clear what combinations will be most successful.

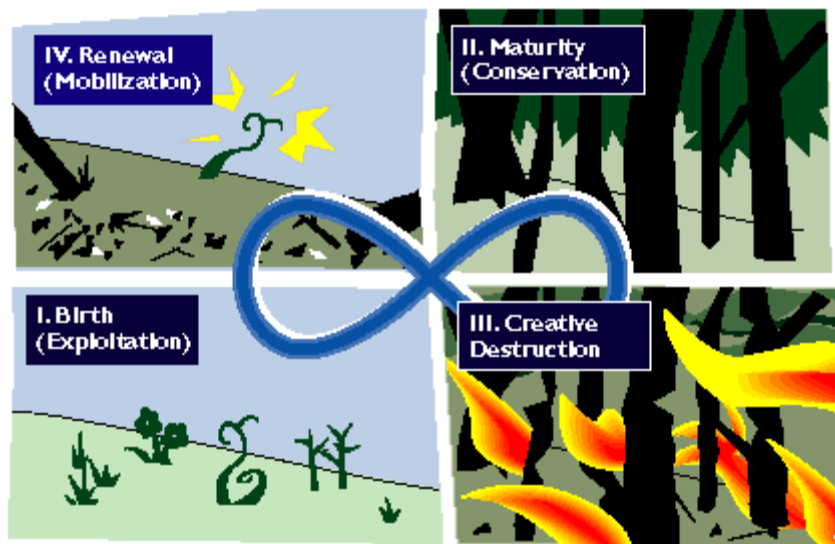
In organizational terms, this is a phase where the needs of the organization are not about increasing efficiency or even effectiveness. Instead, this is a stage of creating connections, mobilizing resources and skills to create the next generation of effective (and eventually efficient) goods and services.



As the brief description above show, the role of the manager and of the leader change radically when moving up the S curve as opposed to traveling the reverse S curve. The lessons from complexity science are highly relevant to traveling the reverse S curve.

Looking at a forest analogy, we learn several things about the ecocycle. First, a healthy forest exhibits patch dynamics. In other words, a healthy forest has all parts of the ecocycle in evidence. Some parts of the forest are dense with mature trees. Other parts are open patches in which life is not obvious to the naked eye. A healthy forest will have areas of new growth with many species. Finally, there are parts of the forest which are in periods of destruction perhaps through a fire, flood or disease.

Patch dynamics are healthy for forests. Yet they look untidy and a bit disorganized. From an aerial view, the unbroken blanket of mature trees may be more aesthetically appealing, but history has shown that a forest in this state is brittle and can be completely devastated by, for example, a fire. Here is the paradox. The forest needs occasional fires (or other forms of creative destruction) to renew itself. However, a massive fire can actually damage not only the trees but also the soil. What this paper is advocating is not a "scorched earth" policy of wanton destruction. Rather fires or their equivalent in organizations, can be beneficial if they break down the structures without damaging the soil.



With no firebreaks in the forest, there is nothing to stop the path of destruction caused by a fire. Fire fighters discovered this in the late 1970s and have since changed strategies. Rather than putting out all fires, they look for situations where they can let a fire burn. They also deliberately set fires at times. Fire serves as a powerful form of creative destruction in forests. It burns away the dead wood; it replaces the soil with needed nutrients and sets the context for the creation of new generations of growth or even new species. A forest needs to have patchiness to it to ensure its long-term viability.

The ecocycle uses the concept of creative destruction and crisis to explain the necessary destruction of forms and structures periodically to maintain the long-term viability of the overall system. The word crisis is derived from the Greek *krinein* meaning to sift. In the ecocycle model, we think about crises as opportunities to sift so that the unnecessary forms and structures are removed to enable the substance to be renewed and continue to evolve.

What does this mean for organizations or human systems? Forms and structures that no longer support the "work" or the mission of an organization or system need to be destroyed in a manner that does not destroy the substance. It is a "substance over form" distinction. Forms and structures are necessary to enable the work to be accomplished but they are not the essence of the work. In health care, this has become a major issue. The substance of health care is not the structures of hospitals, clinics or even the professions of physicians and nurses. Rather these are forms that have enabled health care work. As enablers, they are crucial, but they are not the substance of the work. Forms and structures must be seen as ephemeral. They support the work but are not the work itself.

Why should health care leaders learn about this concept? It sounds quite threatening to the medical professions and institutions. This is a fair assessment; however, it is my contention that this is happening anyway, and it is preferable to be a player in the process to ensure the substance of health care is not lost but indeed renewed in this period of change. We return to the paradox mentioned earlier that "fires" can lead to creative destruction or devastation. Creative destruction is positive and is not synonymous with devastation where not only are the forms and structures destroyed but the substance as well. In a forest, a devastating fire has the potential to destroy the trees and the soil. In these situations, it can take generations before the soil can nurture new life. Creative destruction is designed to release the nutrients so that new life can indeed emerge.

In addition, leaders of health care organizations need to think about whether their organizations exhibit patch dynamics. Is there enough diversity in the organization to prevent a single "match" from setting fire to the whole system? Are there firebreaks in the organization? Firebreaks may take the form of diversity in funding sources so that one funding source cannot determine the survival or demise of the organization. Firebreaks may also be the "skunkworks" in the

organization, in other words, the parts of the organization which are trying out new ideas and approaches uninhibited by the "way things are done here." This is insurance for situations when the community, the funders, the patients or other key constituents no longer support the "way things are done here".

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